**Deals**

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**Discussion Questions # 1**

**Introduction to Information & Incentive Problems**

 **P***lease bring these questions to class because we will discuss them in class.*

In an article you will later, Ron Gilson & Teo Baums introduce three concepts: information asymmetry; agency costs; and uncertainty. The following is a brief excerpt:

*All contracts respond to three central problems: uncertainty, information asymmetry, and agency costs. The special character of venture capital contracting is shaped by the fact that investing in early stage, high technology companies presents these three problems in extreme form.*

*Precisely because the portfolio company is at an early stage, uncertainty concerning future performance is magnified. Virtually all of the important decisions bearing on the company’s success remain to be made, and most of the significant uncertainties concerning the outcome of the company’s efforts remain unresolved. To the extent the entrepreneur is beginning her first company, additional uncertainty concerns the quality of the company’s management. . . Finally, the technology base of the portfolio company’s business exacerbates the general uncertainty by adding scientific uncertainty. . . .*

*The same factors expand the information asymmetries between potential investors and entrepreneurs, as intentions and abilities are far less observable [by investors] than actions already taken [by management]. Similarly, the fact that the portfolio company’s technology involves cutting edge science assures that the information asymmetry between the entrepreneur, typically directly involved in the company’s research effort, and the venture capital fund, even if the fund employs individuals with advanced scientific training, will be unusually wide.*

*Finally, the importance of future managerial decisions in an early stage company whose value depends almost entirely on future growth options, creates potentially very large agency costs . . . . [T]he entrepreneur’s interests will sharply diverge from those of the venture capital investors, especially with respect to the risk level and duration of the investment.*

1. I offer to sell you a used car for $5,000. You need a car and the price is within your budget.

1. Is there anything else you need to know or think about before you agree to purchase the car?
2. Please define the term “asymmetric information.” How does it apply to the purchase of a used car?
3. In principle, could the problem of asymmetric information persuade a potential buyer not to buy a used car? Could this be true even if the used car is as good as the seller says it is?
4. As a buyer, would you be more comfortable if you can ask me questions? What if I am not honest in my answers? How can you improve the odds that I will answer honestly (or, at least, prove later that my answers were false)?
5. Would you be more comfortable if we bring in a mechanic to look at the car?
6. In part “E,” what if the mechanic is my brother-in-law? Please define the term “agency cost.”
7. Would you be more comfortable if I offer to let you pay only $2,000 now, and to pay $3,000 in a year if the car is still running well?
8. In Part “G,” does it matter how we define whether the car is “running well”?
9. Do you think problems of asymmetric information arise also in the sale of a house or a business? Could variations of the steps discussed above for buying a car be helpful?
10. Do you agree with the following statement? “Because the seller always knows more than the buyer, I should never buy anything ever again?”
11. Do you agree with the following statement? “Although transactions vary in their details, every transaction involves problems of information and incentives that can discourage parties from entering into what otherwise would be value-maximizing arrangements.”
12. Do you agree with the following statement? “A central responsibility of transactional lawyers is to help overcome information and incentive problems. They do so with a range of contractual and organizational responses, such as due diligence, contingent purchase price, staged financing, and vouching by third parties.”

2. Stores that sell clothes online often allow people to return them at no charge. But it costs them time and money to let people return them.

1. Why give people a “money-back guarantee” of this sort?
2. If you sell clothes online, and someone who buys them spills wine on them, would you accept the clothes back?

3. You want to go into business organizing outdoor concerts. A challenge, though, is that it sometimes rains, so the concert has to be cancelled.

1. Do you consider this to be an issue of asymmetric information or an issue of uncertainty? What is the difference?
2. If a concert is cancelled because of rain, someone should bear this risk—the performer, the ticket holders, or the owner of the arena. How should we decide who is in the best position to bear the risk of bad weather?

4. Bob Buyer wants to buy a weekend house. You are Bob’s lawyer. He sees a property that he really likes in Pretty County, which is 50 miles away from his year-round home. Susan Seller’s asking price is $1.1 million. Bob offers $950,000 and they settle on a price of $1,030,000. Susan is represented by Linda Lawyer

 Before signing a contract, Bob needs your help with due diligence on the house, which was built in 1957. An important issue is that most houses built then were heated by oil and had oil tanks buried underground. In newer houses, oil tanks are no longer buried underground because of concerns about contaminating soil and groundwater. Buyers looking at older houses sometimes hire experts, who use metal detectors to look for underground tanks. This inspection costs approximately $1,000. If a tank is found, the market practice is for sellers to bear the expense of removing it, which costs about $5,000, but can be significantly more if the tank has leaked and the soil needs to be remediated.

In the property disclosure form, which sellers provide to anyone looking at a house, Susan answered “no” to the question, “Is there an underground oil tank?”

Before signing a contract to buy the house, Bob hires Ira Inspector to look for potential defects in it. In his inspection report, Ira observes that the oil tank currently is in the garage. But he sees pipes going from the garage into the ground, which is a sign that there could be an old oil tank there. “I’m pretty sure there was an underground tank,” Ira tells Bob. “Otherwise, what are those pipes for?”

Bob relays this question to Susan, who answers: “There aren’t any pipes.” When Bob sends a picture, Susan answers: “I don’t know, but maybe those pipes lead to a propane tank. We use propane to heat the pool.” Ira says that this doesn’t make sense, since the pool is quite a distance from the garage.

Susan follows up with another email: “Spoke to the oil company that has supplied oil to the house since I bought it. They re-used the tank that was there and relocated to existing location. Neither I nor they have any knowledge of an underground tank. Further, during construction, we excavated around the entire house and none was found.”

Bob wonders where the tank was before it was moved. Was it underground, so that it might have left contaminants in the soil? Through his broker, Bob asks Susan whether the tank that was relocated used to be underground. Susan replies: “When we bought the house in 1992, the oil tank was in the original garage and was above ground. When we expanded the house, we knocked down the garage and built the new one and relocated the tank to where it is today.”

Bob asks Susan whether she would put a representation in the contract, saying that there is no oil tank and if one is later found, she will pay to clean up any environmental damage. Susan says that all she would say in the contract is, “To the best of my knowledge, there is no underground tank,” and that this representation would “not survive the closing.” This means that if one is found after closing, she is not responsible for any harm it might have caused.

1. Based on these responses, do you think Bob should conduct a scan for an old underground oil tank?
2. Do you think it is reasonable for Bob to ask Susan to bear some of the cost of the scan? As Bob’s lawyer, please offer arguments explaining why Susan should share in the cost.
3. Assume that Bob does a scan and finds an oil tank, and Susan agrees to remove it. How might this interaction affect Bob’s dealings with Susan on other issues?
4. What should Bob’s position be about the venting issue with the current oil tank?
5. Assume that Bob does not like the color and appearance of the oil tank. Is it likely that Susan will bear the expense of replacing it? Is the analysis the same as the request in “d” about venting the tank?

5. The same facts as in problem 4. Ira also finds mold growing in the crawl space under the house. This means there are likely to be mold spores in the air inside the house, something that is not healthy for anyone but is especially an issue for Bob and his family, who have allergies and various respiratory problems.

Ira outlines two steps to eliminate the mold. First, the area must be cleaned thoroughly by professionals who specialize in remediating mold. This step costs approximately $5,000. Second, to prevent growth of mold in the future, a pump must be installed to remove water from below the house and a dehumidifier must be installed to remove moisture in the air. This step costs $2,000.

In response, Susan says, “That’s not mold. It’s just a discoloration, which has been there since we bought the house thirty years ago. If it bothers you, I will ask my housekeeper to scrub it thoroughly with bleach and paint over it.”

a. If Bob walks away from this deal, will other buyers care as much about the mold as Bob?

b. If Bob walks away, is another buyer likely to detect the mold?

c. Assuming that Susan does the same analysis of “a” and “b” (and that she not an honorable person, so she is willing to mislead people if she won’t get caught), what do you expect her position to be? Will she be willing to address this issue?

d. If Susan agrees to address the issue, why might Bob worry that she won’t address it as carefully as he would? If he has this concern, what alternative can he suggest to resolve the issue? (Hint: With this alternative, he would be the one deciding the specifics of what to do.)

6. The same facts as in problem 4. The house has a pool--a nice feature for a weekend house. Bob wants the pool to be attractive. Resurfacing the pool costs approximately $10,000.

Bob also wants to be sure that the pool’s systems are in working order. For example, the heater should work, the drainage pipes should not be clogged or leak, and the motorized filter, which cleans the pool, should also work. Repairing all of these systems would cost approximately $15,000.

In addition, the pool needs all the necessary safety features. For example, the pool needs to have a fence, so no one accidentally falls in and so no uninvited guests use the pool and are injured. Indeed, to get home owners insurance, Bob needs to show the insurance company that there is a fence. It costs $2,000 to install a fence.

The pool also should have two drains, instead of one, in order to reduce the suction from each drain. Otherwise, the suction might be strong enough to pull swimmers down to the drain, causing them to drown. Installing a second drain costs $8,000.

Bob is doing his due diligence in late January. The pool has been covered for the winter, and there is snow on the ground, so Bob is limited in the due diligence he can do. For example, although he can have the cover removed, the pool systems are not designed to work in freezing temperatures. Turning the systems on when the temperature is less than 50 degrees Fahrenheit--as almost certainly will be the case in late January--can cause the systems to break. Bob is willing to delay the closing until the weather is warmer, but Susan wants the closing to take place no later than March 1.

a. Which issues can Bob explore before March 1? Which ones cannot be investigated before March 1?

b. If Susan insists on closing before March 1, what should Bob suggest as a way to address his concerns about the pool and, specifically, about issues that cannot be investigated before March 1?

c. Susan is willing to assure Bob that the pool systems work and are safe. “But if you want the pool to look different, that’s your responsibility,” she says. “You can make any changes you want to the appearance of the pool once you buy the house, but that expense is your responsibility.” Does this distinction seem reasonable? If so, how can Bob and Susan operationalize it?

d. If Susan and Bob proceed with the idea in “c,” can you prediction any scenarios in which they disagree about whether an expense is addressing safety or aesthetic issues? What language would you suggest to deal with this?

1. Same facts as above. In asking $1.1 million for the house, Susan has offered to include outdoor furniture, art, exercise equipment, beds, a dining room table, and other personal property. This personal property was worth approximately $50,000. Since this is a second home for Bob, he liked the idea of buying this personal property as well. When they settled on a price of $1,030,000 (as noted above), this included the personal property.

Before signing a contract, Bob reaches out to you. As a real estate lawyer, you know that New York (where Pretty County is located) has a “mansion” tax. Under this tax, a buyer pays 1% of the value of any home with a purchase price of $1 million or more. This tax does not apply to a home with a purchase price of less than $1 million.

New York also charges an 8 percent sales tax on sales of personal property. While this obviously applies to purchases in a store, it also applies at garage sales and in other circumstances when one individual buys personal property from another, as long as the total price of all the property is more than a minimum amount (which you should assume here is $500).

The town where the house is located also has an annual property tax of 3% of a house’s appraised value. The town’s last appraisal three years ago valued Susan’s house at $800,000, so she has been paying property taxes of $24,000 per year. The town is likely to use Bob’s purchase price as the valuation for his property taxes.

a. Susan’s lawyer sends over a contract, which includes the following language: “The parties hereto acknowledge that there is no consideration attributable to the personal property included hereunder.” In light of this language, what taxes will Bob owe? Which will he avoid?

b. What suggestion can you make that will reduce Bob’s tax bill in the coming years? Please note that Bob will still have to pay Susan a total of $1.03 million--that’s not negotiable--and that Bob is very conservative about tax planning. He will only do something that is clearly legal.